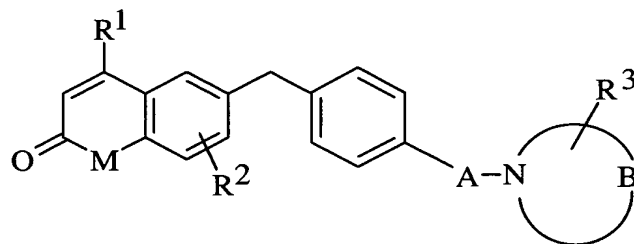


CLAIMS

What is claimed is

1. A compound of the formula:



in which;

- a. M is NZ or O;
- b. Z is represented by H or C₁-C₄ alkyl;
- c. R¹ is represented by hydrogen, (C₁-C₂)alkyl, optionally substituted with one or more halogens, or (C₁-C₂)alkoxy, optionally substituted with one or more halogens;
- d. R² is absent, or may represent up to 2 substituents selected from the group consisting of halogen, nitrile, hydroxy, (C₁-C₄)alkyl, (C₂-C₄)alkenyl, (C₂-C₄)alkynyl, (C₁-C₄)alkoxy, (C₁-C₂)alkyl substituted with one or more halogens, (C₁-C₂)alkoxy substituted with one or more halogens, SR⁴, and NR⁴R⁵;
- e. A is represented by -S(O₂);
- f. B completes a nitrogen containing heterocyclic ring;
- g. R³ may be absent, or may represent up to 2 substituents selected from the group consisting halogen, hydroxy, nitrile, (C₁-C₄)alkoxy, (C₁-C₄)alkyl, optionally substituted heterocyclic, optionally substituted heteroaryl, optionally substituted phenyl, -[CH₂]_mC(O)OR⁴, -[CH₂]_mC(O)R⁴, -[CH₂]_mC(O)NR⁴R⁵, (C₁-C₄)alkylR⁶, -[CH₂]_n-Y[-CH₂]_m-X-[CH₃]_q, (C₃-C₈)cycloalkyl, and -SR⁴;

- h. R^4 is represented by hydrogen, (C_1-C_4) alkyl, optionally substituted benzyl, optionally substituted phenyl, optionally substituted heteroaryl, or optionally substituted heterocyclic;
- i. R^5 is represented by hydrogen, optionally substituted phenyl, (C_1-C_4) alkyl, optionally substituted benzyl or R^4 and R^5 along with the adjacent nitrogen atom can be combined to form a heterocyclic or heteroaryl ring;
- j. R^6 is represented by optionally substituted phenyl, optionally substituted heteroaryl, optionally substituted heterocyclic, or NR^7R^8 ;
- k. R^7 is represented by hydrogen or C_1-C_4 alkyl;
- l. R^8 is represented by hydrogen or C_1-C_4 alkyl;
- m. n is an integer selected from 1, 2, 3, or 4;
- n. Y is absent, or is represented by O, C(O), OH, SH, or S;
- o. m is represented by an integer selected from 0, 1, 2, 3, or 4;
- p. X is absent, or is represented by O, C(O), OH, SH or S;
- q. q is represented by the integer 0 or 1, and; the pharmaceutically acceptable salts, solvates, and prodrugs thereof; with the proviso that if both Y and X are present, then m is not zero.
2. The compound according to claim 1 in which R^1 is represented by trifluoromethyl.
3. The compound according to claim 2 in which M is represented NZ, in which Z is hydrogen.
4. The compound according to claim 3 in which R^2 is absent.
5. The compound according to claim 1 in which M is represented by O.
6. The compound according to claim 2 in which M is represented by O and R^2 is absent.

7. The compound according to claim 1 in which B is represented by a 4-10 membered nitrogen containing heterocyclic ring.
8. The compound according to claim 1 in which said heterocyclic ring contains one further heteroatom selected from S or O.
- 5 9. The compound according to claim 1 in which B completes a heterocyclic ring selected from the group consisting piperidine and piperazine.
10. The compound according to claim 1 in which B completes a heterocyclic ring selected from the group consisting of pyrrolidinyl, tetrahydrothiophenyl, piperidine, piperazine, azepane, azocane, morpholine, thiazolidine, isoquinoline; azetidine, and
10 octahydroquinoline.
11. The compound according to claim 1 in which said compound is selected from the group consisting of:
- a. 1-[4-(2-oxo-4-trifluoromethyl-1,2-dihydroquinolin-6-ylmethyl)benzenesulfonyl]-piperidine-3-carboxylic acid ethyl ester;
- 15 b. 6-[4-(3,4-Dihydro-1H-isoquinoline-2-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- c. 6-{4-[4-(4-Methoxyphenyl)-3-methylpiperazine-1-sulfonyl]benzyl}-4-trifluoromethyl-1H-quinolin-2-one;
- d. 1-[4-(2-Oxo-4-trifluoromethyl-1,2-dihydroquinolin-6-ylmethyl)benzenesulfonyl]-piperidine-4-carboxylic acid ethyl ester;
- 20 e. 6-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinoline-2-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- f. 6-[4-(1,4-Dioxo-8-azaspiro[4.5]decane-8-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- 25 g. 6-[4-(2-Hydroxymethylpiperidine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- h. 6-[4-(4-Ethylpiperazine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- i. 1-[4-(2-Oxo-4-trifluoromethyl-1,2-dihydroquinolin-6-ylmethyl)benzenesulfonyl]-pyrrolidine-2-carboxylic acid methyl ester;

- j. 6-{4-[4-(2-Hydroxyethyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethyl-1H-quinolin-2-one;
- k. 6-[4-(3-Hydroxymethyl-piperidine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- 5 l. 6-[4-(Thiazolidine-3-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- m. 6-{4-[4-(2-Oxo-2-pyrrolidin-1-ylethyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethyl-1H-quinolin-2-one;
- n. 6-[4-(3,4,5,6-Tetrahydro-2H-[2,3']bipyridinyl-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- 10 o. 6-[4-(4-Methylpiperidine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- p. 6-[4-(4-Pyridin-4-ylpiperazine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- q. 6-{4-[2-(2-Hydroxyethyl)piperidine-1-sulfonyl]benzyl}-4-trifluoromethyl-1H-quinolin-2-one;
- 15 r. 6-[4-(2-Hydroxymethylpyrrolidine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- s. 6-[4-(Octahydroquinoline-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- t. 6-[4-(Pyrrolidine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- 20 u. 6-[4-(Azepane-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- v. 6-[4-(2-Methylpiperidine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- w. 6-[4-(Piperidine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- 25 x. 6-[4-(2,6-Dimethylmorpholine-4-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- y. 6-[4-(Azetidine-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- z. 6-[4-(3,4-Dihydro-2H-quinoline-1-sulfonyl)benzyl]-4-trifluoromethyl-1H-quinolin-2-one;
- 30 aa. 6-[4-(3-Hydroxypiperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- bb. 1-[4-(2-Oxo-4-trifluoromethyl-2H-chromen-6-ylmethyl)-benzenesulfonyl]piperidine-3-carboxylic acid ethyl ester;

- cc. 6-[4-(3,4-Dihydro-1H-isoquinoline-2-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- dd. 4-[4-(2-Oxo-4-trifluoromethyl-2H-chromen-6-ylmethyl)-benzenesulfonyl]piperazine-1-carboxylic acid ethyl ester;
- 5 ee. 6-[4-(4-Pyrrolidin-1-ylpiperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- ff. 6-{4-[4-(3-Hydroxypropyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;
- gg. 6-{4-[4-(4-Methoxyphenyl)-3-methylpiperazine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;
- 10 hh. 6-[4-(4-Hydroxy-4-thiophen-2-ylpiperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- ii. 6-[4-(1,3-Dihydroisoindole-2-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- jj. 6-[4-(6,7-Dimethoxy-3,4-dihydro-1H-isoquinoline-2-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- 15 kk. 6-[4-(1,4-Dioxo-8-azaspiro[4.5]decane-8-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- ll. 6-[4-(2-Hydroxymethyl-piperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- 20 mm. 6-{4-[4-(3-Piperidin-1-ylpropyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;
- nn. 6-{4-[4-(2-Methoxyethyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;
- oo. 6-[4-(4-Ethylpiperazine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- 25 pp. 1-[4-(2-Oxo-4-trifluoromethyl-2H-chromen-6-ylmethyl)-benzenesulfonyl]pyrrolidine-2-carboxylic acid methyl ester;
- qq. 6-(4-{4-[2-(2-Hydroxyethoxy)ethyl]-piperazine-1-sulfonyl}benzyl)-4-trifluoromethylchromen-2-one;
- rr. 6-{4-[4-(2-Hydroxyethyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;
- 30 ss. 6-{4-[4-(2-Diisopropylamino-ethyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;

- tt. 6-[4-(3-Hydroxymethyl-piperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- uu. 6-[4-(Thiazolidine-3-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- vv. 6-{4-[4-(2-Oxo-2-pyrrolidin-1-ylethyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;
- 5 ww. 6-[4-(3,4,5,6-Tetrahydro-2H-[2,3']bipyridinyl-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- xx. 6-[4-(4-Methylpiperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- yy. 6-[4-(4-Pyridin-4-ylpiperazine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- 10 zz. 6-{4-[2-(2-Hydroxyethyl)piperidine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;
- aaa. 6-[4-(2-Hydroxymethyl-pyrrolidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- bbb. 6-[4-(Octahydroquinoline-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- 15 ccc. 6-[4-(4-Phenethyl-[1,4]diazepane-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- ddd. 6-{4-[4-(2-Dimethylamino-ethyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;
- eee. 6-[4-(4-Hydroxypiperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- 20 fff. 6-[4-(Azepane-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- ggg. 6-[4-(2-Methylpiperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- hhh. 6-[4-(Piperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- iii. 6-[4-(2,6-Dimethylmorpholine-4-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- 25 jjj. 6-[4-(2-Oxa-5-azabicyclo[2.2.1]heptane-5-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one;
- kkk. 6-{4-[4-(2-Ethoxyethyl)piperazine-1-sulfonyl]benzyl}-4-trifluoromethylchromen-2-one;
- lll. 6-[4-(Azocane-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one
- 30 mmm. 6-[4-(4-Hydroxymethyl-piperidine-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one, and;

nnn. 6-[4-(3,4-Dihydro-2H-quinoline-1-sulfonyl)benzyl]-4-trifluoromethylchromen-2-one

12. A method for inhibiting activation of the androgen receptor comprising administering an effective amount of a compound according to claim 1 to a patient in need thereof.
- 5 13. A method for the alleviating a condition selected from the group consisting of alopecia, acne, oily skin, prostate cancer, hirsutism, and benign prostate hyperplasia, comprising administering a compound according to claim 1 to a patient in need thereof.
14. A pharmaceutical composition comprising a compound according to claim 1 in admixture with one, or more, pharmaceutically acceptable excipients.
- 10 15. A topical pharmaceutical formulation comprising a compound according to claim 1 in admixture with 1, or more, pharmaceutically acceptable excipients suitable for dermal application.
16. An article of manufacture comprising a compound according to claim 1 packaged for retail distribution which advises a consumer how to utilize the compound to alleviate a
15 condition selected from the group consisting of acne, alopecia, and oily skin.